

What Degraded this Stream?

Tools to determine the causes of ecological impairment

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Significance:

A set of methods, tools, case studies, software systems and guidance will make it easier for EPA Regions, states and tribes to determine the causes of biological impairment enabling us to effectively protect and restore streams and rivers.

Year of Water:
Thirty Years of Progress
Through Partnering

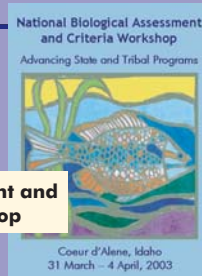
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

GUIDANCE

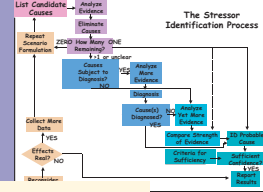


Release of Stressor Identification Guidance

National Bioassessment and Biocriteria Workshop



Watershed Academy Training Module



Training and Problem Solving Workshop

Updated Guidance on Causal Analysis



CASE STUDIES

Case studies are performed to illustrate the application of the stressor identification guidance.

Case Study Little Scioto River

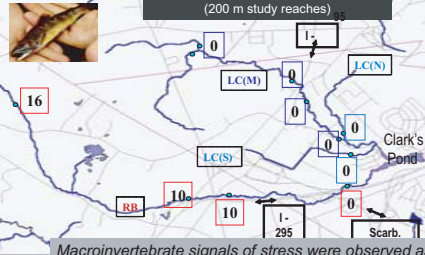


Willamantic River Case Study

Case Study Long Creek

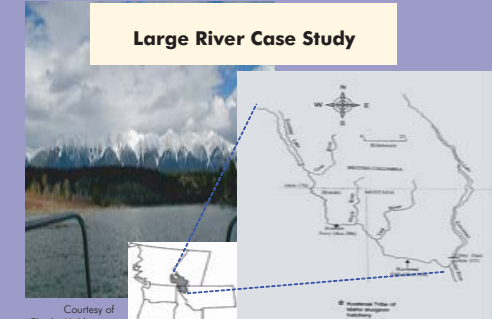


Brook Trout Abundance (200 m study reaches)



Macroinvertebrate signals of stress were observed as well.

Large River Case Study



Collection of Case Studies



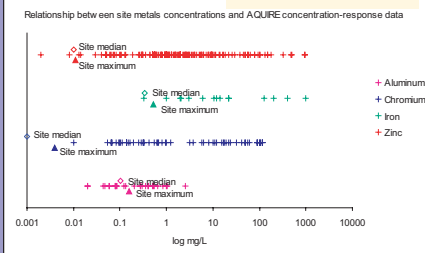
CAUSAL TOOLS

This research will put needed data and associations at the finger tips of resource managers. Efforts are focused on some of the most pervasive causes of stream impairment.

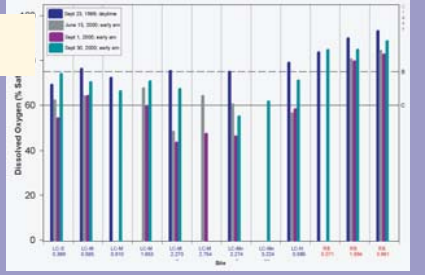


Causal Analysis Tools for Sediment

Causal Analysis Tools for Metals



Causal Analysis Tools for Temperature and Oxygen



Courtesy of Jeff Varschione, DEQ Maine

CADDIS

CADDIS, Causal Analysis and Diagnosis Decision Information System, is being designed to help investigators find, access, organize and share information useful for determining the causes of biological impairment

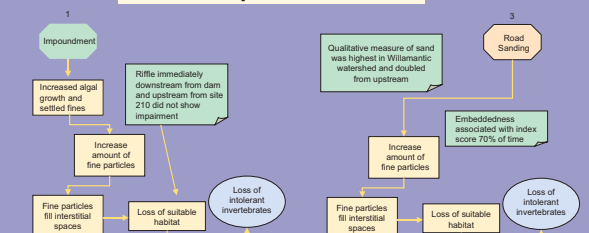
Deer Creek Workshop

Causal Analysis and Diagnosis Decision Information System Workshop Report

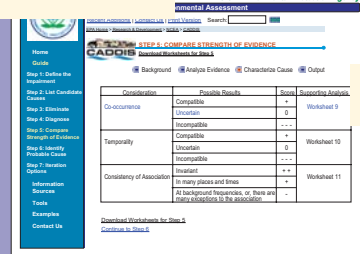
Mount Sterling, Ohio

August 26 - 28, 2002

Causal Analysis Tools Conceptual model



Web-enabled CADDIS I



Data Input & Analysis & CADDIS II

Quantitative Decision Support Systems CADDIS III



Partnering to Protect Human Health and the Environment